

CLAIMS

1. Camera having an optical axis (14) and comprising successively:

- an objective support (1) designed to receive an objective (15);
- a spectral splitter (6) of light into three light components;
- three photoelectric-effect sensors (7-9), each light component being focused on a different sensor, the optical paths between the input of the spectral splitter (6) and the sensors (7 to 9) being different for the three light components;
- electronic means (10) for the processing of information coming from the sensors (7 to 9);

characterized in that the camera also comprises :

- an objective focal plane (4), located between the objective support (1) and the spectral splitter (6), common to all the light components;
- an adapter (5) matching the objective focal plane (4) with the focal planes of the sensors (7 to 9);
- an optical viewfinder (3), outside the field of the sensors (7 to 9), located off the optical axis (14);
- a reflecting shutter (2) located between the objective support (1) and the objective focal plane (4), letting light pass through, in its open position, towards the objective focal plane (4) and orienting the light, in its closed position, towards the viewfinder (3).

2. Video camera according to claim 1, characterized in that the camera comprises at least one mode in which the shutter (2) periodically switches between the closed and the open positions and in that its switching period is smaller than the duration of the retinal persistence.

3. Camera according to any of the claims 1 to 2, characterized in that the shutter (2) comprises at least one rotative element (20, 30) comprising at least one mirror part

(21, 22, 31, 32) corresponding to its closed position and at least one aperture part (23, 24, 33, 34) corresponding to its open position.

5 4. Camera according to claim 3, characterized in that the camera comprises an automatic control device (12) for the rotative element (20, 30) at a speed of rotation (VR) proportional to the frequency (F) of a signal given by the processing means (10) to the automatic control device (12), the signal being a synchronization signal for the reading of the
10 sensors (7 to 9) by the processing means (10), and in that the camera comprises a sensor (13) of the position of the rotative element, the position sensor (13) and the automatic control device (12) enabling the rotative element (20, 30) to be phase-shifted with respect to the synchronization signal.

15 5. Camera according to claim 4, characterized in that the sensors (7 to 9) are frame transfer sensors.

6. Camera according to any of the claims 3 to 5, characterized in that the shutter (2) comprises three modes that can be selected by the user : a viewfinder mode corresponding
20 to a fixed rotative element (20, 30) that always has a mirror part (21, 22, 31, 32) that intersects the optical axis (14); a video mode corresponding to a rotative element (20, 30) that always has an aperture part (31, 32, 33, 34) that intersects the optical axis (14); and a combined mode corresponding to the rotative
25 element (20, 30) in rotation.

7. Camera according to any of the claims 3 to 6, characterized in that rotative element (20, 30) comprises at least two mirror parts (21 and 22, 31 and 32) and at least two aperture parts (23 and 24, 33 and 34), and in that, in the
30 vicinity of the optical axis (14), the mirror parts (21 and 22, 31 and 32) all cover a first angular sector (S1) that is substantially identical and the aperture parts (23 and 24, 33 and 34) all cover a second angular sector (S2) that is substantially identical.

5 8. Camera according to claim 7, characterized in that the shutter (2) comprises at least two rotative elements (20 et 30) having the same axis (27) of rotation, that are superimposed and can be offset by an angular offset such that the mirror parts (21 and 31, 22 and 32) of rotative elements (20 and 30) overlap at least partially.

9. Camera according to claim 8, characterized in that the offset can be selected by the user.

10 10. Camera according to any of the claims 1 to 9, characterized in that the camera comprises a screen (11) to view the synthesis of the different light components after their passage into the processing means (10).

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